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Male War-Zone Veterans' Perceived Relationships With Their Children: The Importance of Emotional Numbing[1]

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Despite growing recognition of substantial interpersonal impairment among many war-zone veterans with posttraumatic stress disorder (PTSD), little is known about the association between PTSD symptomatology and veterans' relationships with their children. This study examined the differential pattern of associations between the symptom clusters of PTSD and the perceived father–child relationships of 66 male Vietnam veterans. Analyses revealed that only the emotional numbing cluster was significantly related to perceived quality of all relationship domains. The association between emotional numbing and perceived relationship quality remained significant in regression analyses even after controlling for fathers' family-of-origin stressors, combat exposure, depression, and substance abuse. Findings suggest that emotional numbing may be the component of PTSD most closely linked to interpersonal impairment in war-zone veterans.

KEY WORDS: posttraumatic stress disorder; emotional numbing; parent–child relationship; interpersonal problems.

In recent decades, studies have documented a variety of interpersonal difficulties commonly experienced by male veterans with war-zone-related PTSD (e.g., Carroll, Rueger, Foy, & Donahoe, 1985; Jordan et al., 1992; Nezu & Carnevale, 1987; Roberts et al., 1982). However, although interpersonal difficulties are now recognized as a central and often intractable feature of the phenomenology of PTSD (DeFazio & Pascucci, 1984; Rosenheck & Thomson, 1986; Solomon, 1988), surprisingly little attention has been paid to the impact of PTSD and its associated interpersonal impairment on veterans' families. Moreover, although clinical accounts suggest that a veteran's PTSD may negatively affect all members of his family (Brende & Goldsmith, 1991; Haley, 1984; Matsakis, 1988), research has focused on problems in veterans' marital relationships, largely ignoring the impact of PTSD on veterans' relationships with their children.

Few studies have examined the intergenerational effects of war-zone-related PTSD, most focusing on the association between fathers' PTSD and behavior problems in their children. Two studies (Caselli & Motta, 1995; Jordan et al., 1992) found that children of veterans with PTSD exhibited more behavior problems on the Child Behavior Checklist (CBCL) than did children of veterans without PTSD. Other studies revealed that among the families of veterans with PTSD, children of violent fathers had significantly higher CBCL scores than children of nonviolent fathers (Harkness, 1993), and a majority of children evidenced significant clinical elevations on the Minnesota

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Multiphasic Personality Inventory (Beckham et al., 1997). Although these investigations suggested an important link between paternal PTSD and child behavioral and psychological problems, they did not specify how PTSD may lead to such problems, nor did they rule out explanatory factors such as veterans' depression and substance abuse that have been associated with both PTSD (e.g., McFall, Mackay, & Donovan, 1992; Southwick, Yehuda, & Giller, 1991) and parenting difficulties (e.g., Cummings & Davies, 1992; Mayes, 1995) and may at least partly account for the relationship between fathers' PTSD and problems in children.

The present study investigated whether war-zone-related PTSD is uniquely associated with perceived deficits in the father–child relationship, after controlling for the effects of other variables that may be associated with relationship quality. Given growing evidence that PTSD contains four distinct clusters—reexperiencing, effortful avoidance, emotional numbing, and hyperarousal—that are differentially associated with important outcomes (King, Leskin, King, & Weathers, 1998; Sack, Seeley, & Clarke, 1997; Vreven, Gudanowski, King, & King, 1995), we included not only the PTSD diagnosis but also its separate symptom clusters in analyses. Because the behavioral avoidance, restricted affect, diminished interest, and detachment and estrangement which characterize Criterion C of PTSD appeared most directly related to the interpersonal realm, we hypothesized that these avoidance and numbing symptoms would be most highly associated with perceived problems in the parent–child relationship.

Method

Participants

Participants were 66 male Vietnam theater veterans recruited through newspaper ads and flyers for research participation at the Boston VAMC's National Center for PTSD. They were drawn from a larger study of response bias in self-reported psychopathology ($N = 82$) and were included in the present study because they had one or more children. This convenience sample covered the broad spectrum of PTSD symptom severity (see Table 1), with 19 participants (29%) meeting DSM-IV criteria for PTSD by a minimum score of 1 for Frequency/2 for Intensity on the Clinician-Administered PTSD Scale (CAPS; Blake et al., 1995; Weathers, Ruscio, & Keane, 1999). The sample was primarily Caucasian (83%) and African American (12%). Most participants (86%) had at least a high school education and were employed, either full-time (63%) or

Table 1. Means and Standard Deviations of Primary and Covariate Measures for the Total Sample and for Participants Currently Residing and Not Residing With Their Children

	Currently residing with children ($N = 29$)	Not residing with children ($N = 37$)	Total sample ($N = 66$)
CAPS PTSD variables			
PTSD total severity	25.93 (21.08)	36.92 (32.99)	32.09 (28.71)
Reexperiencing (Criterion B)	5.59 (6.96)	9.43 (11.29)	7.74 (9.75)$^{+}$
Avoidance and numbing (Criterion C)	8.83 (10.01)	13.30 (13.42)	11.33 (12.16)
Effortful avoidance only	1.83 (3.39)	2.86 (4.32)	2.41 (3.95)
Emotional numbing only	7.00 (7.72)	10.43 (10.06)	8.92 (9.20)
Hyperarousal (Criterion D)	11.52 (6.94)	14.19 (10.35)	13.02 (9.05)
Father–child relationship variables			
Child Misbehavior/Discipline Problems	1.26 (0.68)	—	1.26 (0.68)
Positive Sharing and Support	2.39 (0.78)	2.10 (1.20)	2.23 (1.04)
Child Disagreement/Disapproval	1.16 (0.63)	1.34 (0.97)	1.26 (0.84)
Contact With Children	6.48 (1.30)	3.92 (2.01)	5.06 (2.14)***
Overall Relationship Quality	4.52 (0.78)	3.51 (1.50)	3.95 (1.33)**
Covariate variables			
Age of veteran	50.10 (2.88)	52.16 (5.91)	51.26 (4.90)$^{+}$
Combat Exposure Scale total score	23.36 (9.69)	22.00 (11.63)	22.58 (10.78)
Childhood financial/residential instability[a]	0.17 (0.99)	−0.13 (0.50)	0.00 (0.76)
Family-of-origin psychopathology	1.28 (1.56)	1.35 (1.74)	1.32 (1.65)
Childhood relationships[a]	− 0.13 (0.50)	0.10 (0.72)	0.00 (0.64)
Number of premilitary traumas	0.97 (1.40)	1.76 (1.88)	1.41 (1.72)$^{+}$
Number of depression symptoms	1.41 (1.88)	1.86 (2.58)	1.67 (2.30)
Substance abuse/dependence	14%	19%	17%

Note. Significance notation refers to statistically significant differences between veterans currently residing vs. not residing with their children.
[a] *M* (*SD*) of standardized variables.
$^{+}p < .10$. $^{**}p < .01$. $^{***}p < .001$.

part-time (14%), during the previous 3 years. The majority were married or living with a partner (67%), and nearly half (29 participants, or 44%) were residing with at least one of their children at the time of the study. Participants had between one and eight children ($M = 2.6$, $SD = 1.4$) whose ages averaged 22.4 years ($SD = 6.8$) and ranged from 6 months to 39 years.

Procedure

In three sessions approximately 2–3 days apart, participants were administered structured clinical interviews and a battery of self-report questionnaires, including measures used only in the larger study. Structured interviews were administered by one of four master's- or doctoral-level clinicians. Participants were paid $120 for completing all sessions.

Primary Measures

PTSD

PTSD was assessed with the CAPS (Blake et al., 1995; Weathers et al., 1999), a structured interview yielding both continuous symptom severity scores and PTSD diagnoses. Severity scores were computed by summing over frequency and intensity ratings for the symptoms of PTSD and its major symptom clusters.

Relationships With Children

Participants' current relationships with their children were evaluated by items drawn from the Life Stressors and Social Resources Inventory—Adult Form (LISRES-A; Moos & Moos, 1994) and a Biographical Inventory created for the present study. Following a rational approach to test construction (Jackson, 1971; Nunnally, 1978), the available pool of 21 father–child relationship items was sorted into three reliable, theoretically defensible indices by five doctoral-level judges (two developmental psychologists and three child-clinical psychologists). An item was included on a scale only when its placement was agreed upon by at least four judges and did not reduce internal consistency. The final scales were as follows.

The Child Misbehavior/Discipline Problems Scale (5 items; $\alpha = .89$) assessed the frequency with which children get angry with the veteran, misbehave or disobey him, have bursts of anger or moodiness, act stubborn or have temper tantrums, and get on the veteran's nerves. This scale was completed only by the 29 participants who were living with at least one of their children at the time of the study. The Positive Sharing and Support Scale (5 items; $\alpha = .88$) assessed the frequency with which children try to understand the veteran's feelings and cheer him up when he's sad or worried, as well as the extent to which the veteran can confide in his children, shares mutual interests or activities with his children, and can count on children for help when he needs it. The Child Disagreement/Disapproval Scale (3 items; $\alpha = .77$) assessed the frequency with which the veteran's children are critical or disapproving of him, expect too much of him, or disagree with him about important things.

Two additional variables were assessed by individual items representing global ratings of the parent–child relationship. Contact With Children assessed how frequently participants had contact with their children during the past year (0 = *no contact*, 7 = *daily/almost daily contact*). Overall Relationship Quality asked participants to rate the overall quality of their relationship with their children during the past year (1 = *poor/distant*, 5 = *excellent/close*).

Covariate Measures

Combat Exposure

Participants' degree of combat exposure was assessed by the Combat Exposure Scale (CES; Keane et al., 1989), a widely-used, 7-item questionnaire measuring key elements of war-zone exposure.

Financial/Residential Instability in Childhood

Instability in participants' childhood was measured by a standardized composite of 4 items ($\alpha = .76$): perceived financial situation of the family when the veteran was a child, perceived frequency with which the family had a hard time making ends meet, number of different residences before age 18, and number of times that the veteran changed schools as a result of moving.

Psychopathology in Family of Origin

Veterans specified which (if any) members of their family of origin had an alcohol/drug problem or another mental health problem. The number of individuals with one or more of these problems was summed, with parents and stepparents accorded twice as much weight as others to account for the particularly harmful effects of parental psychopathology on children's psychosocial development (Factor & Wolfe, 1990).

Childhood Relationships

The overall quality of veterans' childhood relationships ($\alpha = .76$) was represented by a standardized composite of their ratings of relationships with parents, other relatives, friends, teachers, and neighbors in childhood.

Premilitary Trauma

Exposure to traumatic events prior to military service was assessed by an expanded version of the Life Events Checklist (LEC), the trauma assessment portion of the CAPS. Participants indicated which of 17 potentially traumatic life events they experienced before the military, and a follow-up interview determined which endorsed events constituted a traumatic stressor by DSM-IV criteria. Scores represented the number of stressful event types experienced prior to the military that met Criterion A for PTSD.

Depression and Substance Abuse/Dependence

To increase variability, a continuous measure of current depression was created by counting the number of symptoms of major depression endorsed on the Structured Clinical Interview for DSM-IV (SCID; First, Spitzer, Gibbon, & Williams, 1996). By contrast, current substance abuse/dependence was assessed as present or absent by the Addictive Behaviors Questionnaire (ABQ; Weathers & Brief, 1991), a self-report measure corresponding directly to the DSM-IV criteria for substance use disorders. Participants who met DSM-IV criteria for alcohol or marijuana abuse or dependence on the ABQ (the only substances reported) were considered to have a substance-related disorder.

Overview of Analyses

Bivariate correlations examining the associations between PTSD symptom clusters and parent–child relationship quality were followed by theoretically-driven, hierarchical multiple regression analyses assessing the unique variance in relationship quality explained by PTSD and its symptom clusters, over and above the set of covariate variables. Six regression analyses were performed for each of the five relationship variables. In each regression, veterans' age was entered on the first step of the analysis. Combat exposure was entered on the second step. Variables pertaining to veterans' childhood (financial/residential instability, family-of-origin psychopathology, childhood relationships, and premilitary trauma) were entered on the third step. Depression and substance abuse/dependence were entered on the fourth step. The PTSD diagnosis or one of its cluster scores was the last variable to enter the regression analysis. The only exception was made for analyses in which Contact With Children was the dependent variable, in which a dummy-coded variable representing current residence with children was entered before any of the other covariates.

Results

Correlational analysis revealed that severity of emotional numbing was most highly associated with relationship quality, having significant correlations with all five parent–child relationship variables (see Table 2). Reexperiencing, effortful avoidance, and hyperarousal were each correlated with one or more relationship variables, but these correlations were generally smaller than those involving emotional numbing. This suggested that the symptom clusters of PTSD were differentially

Table 2. Zero-Order Correlations Between PTSD Diagnostic Status or Symptom Severity and Relationship Variables

	Relationship Variable				
PTSD diagnosis or symptom severity	Misbehavior ($N = 29$)	Positive sharing ($N = 66$)	Disagreement ($N = 66$)	Contact ($N = 65$)	Overall quality ($N = 66$)
PTSD diagnostic status[a]	$-.02_{}$	$-.25^{*}_{}$	$.32^{**}_{}$	$-.28^{*}_{}$	$-.48^{***}_{}$
PTSD total severity	$.27_{}$	$-.31^{*}_{}$	$.28^{*}_{}$	$-.34^{**}_{}$	$-.55^{***}_{}$
Reexperiencing	$-.01_{a}$	$-.10_{a}$	$.22_{a,b}$	$-.24_{a}{}^{+}$	$-.39_{a}{}^{**}$
Avoidance and numbing	$.35_{b}{}^{+}$	$-.46_{b}{}^{***}$	$.30_{b}{}^{*}$	$-.39_{a}{}^{**}$	$-.63_{b}{}^{***}$
Effortful avoidance	$-.09_{a}$	$-.27_{a,c}{}^{*}$	$.14_{a}$	$-.29_{a}{}^{*}$	$-.42_{a}{}^{***}$
Emotional numbing	$.49_{c}{}^{**}$	$-.49_{b}{}^{***}$	$.34_{b}{}^{**}$	$-.39_{a}{}^{**}$	$-.66_{b}{}^{***}$
Hyperarousal	$.33_{b,c}{}^{+}$	$-.25_{c}{}^{*}$	$.25_{a,b}{}^{*}$	$-.28_{a}{}^{*}$	$-.48_{a}{}^{***}$

Note. Correlations in the same column that do not share subscripts differ at $p < .05$. PTSD diagnostic status and PTSD total severity were not included in these statistical comparisons of nonindependent correlations.

[a] Values in this row are point–biserial correlations.

$^{+}p < .10$. $^{*}p < .05$. $^{**}p < .01$. $^{***}p < .001$.

Table 3. Individual Hierarchical Regression Results: Proportion of Variance Explained by PTSD and Its Symptom Clusters in Relationship Variables Following All Covariates

	Misbehavior ($N = 28$)		Positive sharing ($N = 65$)		Disagreement ($N = 65$)		Contact ($N = 64$)		Overall quality ($N = 65$)	
PTSD cluster	β	ΔR^2	β	ΔR^2	β	ΔR^2	β	ΔR^2	β	ΔR^2
PTSD diagnostic status	−.50	.05	−.20	.02	.54	.12**	−.22	.02	−.55	.13**
Reexperiencing	−.19	.02	.21	.02	.33	.04	−.12	<.01	−.22	.02
Avoidance and numbing	.51	.09	−.72	.18***	.49	.09*	−.58	.12***	−.86	.26***
Effortful avoidance	−.44	.05	−.21	.02	.16	.01	−.26	.03+	−.39	.07*
Emotional Numbing	.66	.18*	−.80	.24***	.54	.11**	−.60	.14***	−.89	.29***
Hyperarousal	.13	<.01	−.16	<.01	.42	.06*	−.33	.04+	−.36	.05+

+ $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

associated with characteristics of the father–child relationship.

Hierarchical multiple regression analyses revealed that depression severity accounted for a significant portion of variance in Positive Sharing and Support scores, $\beta = -.37$, $p < .01$, and in Overall Relationship Quality, $\beta = -.48$, $p < .001$. Two covariates were significantly associated with Contact With Children: residence with children, $\beta = .60$, $p < .001$, and financial/residential instability in the veteran's childhood, $\beta = -.28$, $p < .05$. None of the other covariates uniquely contributed variance to any of the five dependent variables. The full covariate set explained 12–46% of the variance in the relationship variables.

Table 3 presents results for the final step of all regression analyses. Each pair of β and ΔR^2 represents the unique association between PTSD diagnosis or symptom cluster and one of the five relationship variables, beyond the variance explained by the full covariate set. Once again, the emotional numbing cluster was by far the most powerful correlate of veterans' relationships with their children, explaining 11–29% of the variance in relationship scores beyond the variance explained by the covariates. Comparison of ΔR^2 values in Table 3 with (squared) correlation values in Table 2 revealed that the proportion of variance explained by emotional numbing remained relatively constant across the bivariate and multivariate analyses, indicating that numbing overlapped only minimally with the covariate variables.

By contrast, none of the other PTSD symptom clusters was consistently associated with the five relationship variables beyond the covariate set. Although hyperarousal remained a significant correlate of Child Disagreement/Disapproval and avoidance remained a significant correlate of Overall Relationship Quality, neither cluster accounted for nearly as much variance in these variables as emotional numbing. These associations were not significantly moderated by current residence with children (all ΔR^2s < .03), suggesting that despite a few mean differences between veterans who were and were not living with their children (see Table 1), the present findings held whether children lived in the home or not.

Discussion

The present study indicated that emotional numbing is the only aspect of PTSD that is uniquely and consistently associated with veterans' perceived relationships with their children. Although the other PTSD symptom clusters were correlated with several relationship variables in bivariate analyses, many of these associations disappeared following inclusion of the covariate set, and relationships that remained statistically significant were weaker than those found for emotional numbing. Although it would be premature to discount the roles played by other PTSD symptoms in relationship difficulties, these results do suggest that war-zone veterans with severe emotional numbing—not necessarily those with the PTSD syndrome—may be at particular risk for interpersonal problems.

The present findings suggest that the disinterest, detachment, and emotional unavailability that characterize emotional numbing may diminish a father's ability and willingness to seek out, engage in, and enjoy interactions with his children, leading to poorer relationship quality. Alternatively, numbing may not be causally related to interpersonal outcomes, or may affect children through channels other than the parent–child relationship. Further research is needed to elucidate the nature of the association between emotional numbing and relationship quality and to determine whether the interpersonal difficulties associated with PTSD may be improved by treatment and prevention programs that target numbing symptoms.

Although the consistency and strength of these results hint at their robustness, several limitations of the study temper the conclusions that may be drawn. First, although our sample had a number of strengths, the fact

that it was not clearly a clinical or a community sample and that only 29% of participants met criteria for PTSD made it difficult to determine the generalizability of the present findings. These findings need to be replicated in other veteran samples, as well as in civilian samples and with mothers and other caregivers. Second, the relatively small sample size calls into question the stability of the present results, particularly given the large number of analyses performed. Although we chose to conduct separate regression analyses to minimize the number of variables in each analysis and thus maximize statistical power, this larger number of analyses increased the risk of Type 1 error. Thus, these findings should be regarded as tentative until they are replicated in larger samples.

Finally, the present study relied on a small number of self-report variables collected only from the veteran's perspective. These data could not assess whether participants' children actually behave in ways described by their fathers, or whether veterans with certain PTSD symptoms are more sensitive to particular behaviors in their children or interpret these behaviors in a more negative light. Observational data are needed, as are data collected from veterans' spouses and children, to clarify and extend the present results. However, as fathers' negative perceptions may have unfavorable consequences for children regardless of their accuracy, subjective appraisals of relationship quality may remain important in efforts to understand and ameliorate interpersonal impairment associated with PTSD.

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